

**REMARKS**

This is in response to the Office Action dated July 7, 2004, in which Claims 6-7, 22, 24 and 25 were rejected under 35 U.S.C. 112, Claims 1-23, 26-32, and 34 were rejected under 35 U.S.C. 102(a), 102(e), and/or 103(a), while Claims 24, 25 are allowable if the rejection under 35 U.S.C. 112 can be overcome, and Claim 33 is allowable if rewritten into independent form. Claims 1, 6-7, 22 and 33 have been amended above. It is respectfully submitted that, as amended, all the pending claims are allowable.

**Rejection Under 35 U.S.C. 112**

**Claims 6-7**

As amended, Claims 6 and 7 are now depending on Claim 5, in which the handle portion has been defined. Therefore, the rejection for having insufficient antecedent basis for this limitation is overcome.

**Claim 22**

In Claim 22, the limitation “said image processor unit” has been amended as “said image processor module” as claimed in Claim 1. Therefore, the rejection for being lack of antecedent basis is overcome.

**Claims 24 and 25**

Claims 24 and 25 are dependent claims of Claim 22 that depends on Claim 1. Claim 22 discloses “at least one processor system in electrical communication with, to receive operational data from and to control the operations of at least one of said control mechanism, said camera unit, said light sources and said display device based on at least one predetermined instruction; and at least one electronic image memory storage medium for storage and retrieval of said predetermined instruction by processor system. In Claims 24 and 25, the predetermined instruction includes said captured and said formatted images, respectively.

The captured image and the formatted image to be stored in and retrieved from the electronic image memory storage medium have been disclosed in paragraph [0022] of the originally filed specification as:

“The processor 405 is in electrical communication with the image memory storage medium 406 for storage and retrieval of the pre-stored and/or user-inputted instructions as well as captured and formatted images”.

As the apparatus as claimed in Claims 1, 22, 24 and 25 is to facilitate a viewing of an object by human eyes, the image of the object captured by the camera unit is thus the basis to be modified and manipulated. In this invention, one way to modify and manipulate the captured image includes controlling operations of the control mechanism, the camera unit, the light source and the display device as claimed in Claim 24. More specifically, when the user is not satisfied with the image captured by the camera unit with the original or previous settings, the settings of control mechanism and the display unit can always be adjusted to modify and manipulate the captured image, or the camera unit and the light source can also be controlled based on the captured image to capture a preferred image. Similarly, when the formatted image displayed on the display device is not satisfactory to the user, as claimed in Claim 25, the formatted image can also be used as a basis to control operations of the camera unit, the light source, the control mechanism and the display device, so as to capture a more satisfactory image.

Therefore, the functions and objectives of the apparatus as disclosed in the specification and the claims has introduced how the captured and formatted images can act as predetermined instructions in order to control the operations of at least one of the control mechanism, the camera unit, the light sources and the display device.

### **Claims 30, 31, and 33**

The specification as amended above has provided antecedent basis for the noise elimination and illumination equalization as part of the image enhancement, and Claim 33 has been rewritten into independent form.

### **Rejection Under 35 U.S.C. 102(b)**

Claims 1-4, 10, 11, 13, 14, 16, 22, 23, 26-28, 30, 32 and 34 were rejected under 35 U.S.C. 102(b) as being anticipated by Kobayashi et al. (U.S. Patent 5,748,228).

**Claim 1**

The rejection over Claim 1 is respectfully traversed because Kobayashi et al. fails to specifically teach:

(1) at least one light source disposed on said holder mechanism first surface to illuminate at least a portion of the object; and

(2) at least one electrical image memory storage medium for storage and retrieval of both said captured image and said formatted image.

Kobayashi et al. discloses an image information enlarging reading device that uses a two-dimensional contact type image sensor 2 on the bottom part of the main body 1 (col. 4, lines 1-3). Further in col. 4, lines 29-34, Kobayashi et al. discloses "Inside the main body 1 of the image information enlarging reading device, two long light sources (cathode tubes) 7 which act both as illuminations for two-dimensional contact type image sensor 2 and backlight for liquid crystal display 3 are provided in parallel and at the same height."

Being a contact type image sensor, the image sensor 2 basically covers all the portions of an object to be viewed. Therefore, there leaves no space for disposing the light source on the bottom part of the main body 1 to provide efficient illumination to the document. That is, the light source may be disposed inside the main body 1, to transmit through apertures of the photoreceptive elements of the image sensor 2 and then reflected on the surface of the document. Should the light source being disposed on the bottom surface of the main body, either the direct contact between the image sensor 2 and the document is blocked by the light source, or the light source has to be located at a place where no optical path is available for the light source to illuminate the document.

Therefore, Kobayashi et al. does not only fail to teach the light source being disposed on said holder mechanism first surface, but also teaches away from such teaching.

As amended, Claim 1 includes an electrical image memory storage medium operative to store both the captured image and the formatted image. In such manner, the camera unit can capture and save the image to the memory at the time the formatted display is displaying the image formatted based on the previous captured image. Such buffering effect provides a faster processing of the images and the user-inputted instructions. As

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understood, all that Kobayashi et al. teaches about the memory is “the image read by the image inputting portion is once stored in memory 23 and it is displayed” (col. 6, lines 59-60), “The image information read by image sensor 2 is first stored in memory 23 (col. 6, lines 66-67), “Image inputting portion 21 of the image sensor 2 is driven by sensor controlling circuit 22, and the image read by image inputting portion 21 is first stored in memory 23” (col. 7, lines 52-55) and “The image information read by image sensor 2 is first stored in memory 23 (col. 7, lines 66-67)”. That is, Kobayashi et al. teaches only the memory for storing the captured image, but fails to teach the memory for storing the formatted image. As a consequence, the image processing speed of Kobayashi et al. will be much slower.

Claims 2-32 and 34 are dependent claims of Claim 1 patentable over Kobayashi et al. Therefore, the rejections over these claims are also respectfully traversed.

#### **Rejection Under 35 U.S.C. 102(e)**

Claims 1-8, 12-14, 17, 18, 20, 21 and 34 were rejected under 35 U.S.C. 102(e) as being anticipated by Bronson (U.S. Patent 6,384,863).

The Bronson reference was filed on October 11, 2000. The present application was filed on April 5, 2001.

Submitted herewith are the declarations of inventors Christopher C. Jung and Richard A. Buck. The declarations authenticate the attached note or pages prepared by Mr. Jung on 16 September 2000 and 18 September 2000. The pages were witnessed by Mr. Buck on September 28, 2000. The notebook pages evidence that the subject invention was invented prior to the filing date of the Bronson patent, i.e., prior to October 11, 2000. As such, Applicants submit that the Bronson patent should be removed as a reference to the subject application under 35 U.S.C. § 102(e).

#### **Rejection Under 35 U.S.C. 103(a)**

Insofar as the claims rejected under 35 U.S.C. § 103 are dependent claims, the claims are believed to be distinguishable over the cited references in view of the amendment to Claim 1, and the arguments set forth above. Additionally, to the extent the rejection under 35

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U.S.C. § 103 is based in whole or in part upon the Bronson reference, that reference is not believed to be prior art under 35 U.S.C. § 102(e), as set forth above and as demonstrated in the accompanying declarations. However, additional bases of distinguishing the claims over the cited references are set forth below.

Claims 9 and 31 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to Claim 1 above.

Claim 9 was also rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson (U.S. Patent 6,384,863).

### **Claim 9**

Kobayashi et al. appears to teach a contact type image sensor. A contact type image sensor is understood to be that type of optical flatbed scanner that does not use the traditional CCD arrays that rely on a system of mirrors and lenses to project the scanned image onto the array. Therefore, the modification proposed by the Examiner teaches against the principle of operation of Kobayashi et al, and there is no motivation or suggestion for the proposed modification.

### **Claim 31**

Kobayashi et al. does not appear to disclose whether a noise or undesired feature would occur to the image of an object at all. Therefore, there is no desirability for elimination of the noise or filtering the undesired feature. There is thus no suggestion or motivation for the modification as proposed by the Examiner.

### **Claim 10**

Claim 10 was rejected under 35 U.S.C. 103(a) for being unpatentable over Bronson.

As understood, Bronson discloses a microdisplay defined as a flat-panel display technology used as a viewfinder under 1-inch in diagonal (col. 4, lines 13-18). Bronson also discloses that the microdisplay view finder may also offer much higher resolution than a direct view display, may be up to 1280×1024.

It is known in the art that a LCD having a resolution 1280×1024 means that there are 1280 pixels formed on each row and 1024 pixels formed on each column of the display panel, and the pixel pitch can be made as low as 0.2mm. That is, with 1024 pixels formed

on a row, the dimension of the row has to be no less than 20cm. It is not possible, at least based on the current LCD technology, that one-inch LCD microdisplay can be made with a resolution of 1280×1024. Therefore, it is not well known that LCD device can be used for making a microdisplay as disclosed by Bronson.

### **Claims 15, 17 and 18**

Claims 15, 17, and 18 were rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. as applied to Claim 1 above, and further in view of Bronson.

Kobayashi et al. appears to disclose a reading device using a contact type image sensor. That is, to read a document, the reading device has to be disposed on the document and moved along the document for reading different part thereof. No motivation is apparent to modify the reading device disclosed by Kobayashi et al. to include a handling portion (hand-held portion) having a finger operated adjusting switch as claimed in Claims 15, 17, and 18. Therefore, there is no suggestion or motivation for combining Kobayashi et al. and Bronson for the invention as claimed in Claims 15, 17 and 18.

### **Claim 16**

Claim 16 was rejected under 35 U.S.C. 103(a) as being unpatentable over Bronson as applied to claim 1 above, and further in view of Kobayashi et al.

Kobayashi et al. discloses a power supply switch 4 and an image black/white inversion switch for switching the display of characters and background. It appears that the switch 4 is operative to choose between on and off, and the switch 5 is operative to choose whether the character and background is inverted or not. That is, neither of the switches 4 and 5 appears to be a mode selection device for browsing and selecting at least one operation of said image processor module.

### **Claims 19 and 29**

Claim 19 was rejected under 35 U.S.C. 103(a) for being unpatentable over Kobayashi et al. in view of Hoshino et al. (U.S. 5,027,149) and over Bronson in view of Hoshino et al.

Claim 29 was rejected under 35 U.S.C. 103(a) for being unpatentable over Kobayashi et al. in view of Piehn et al. (U.S. Patent Application Publication 2001/0056342) and over Bronson in view of Hoshino et al.

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As there is no evidence in the record on which to base those modifications/combinations as proposed by the Examiner, the Examiner is thus requested to reconsider, and withdraw the obviousness rejection.

Applicants have added new Claim 35, based on allowable original Claim 24, in independent form.

Applicants have added new Claim 36, based on original Claim 25, written in independent form.

Applicants have added new Claim 37, based on Claim 33, in broader form, deleting portions of the language respecting the construction of the image processor module.

Applicants have added new Claim 38, which specifies particular image enhancement features of the present invention stated in what is believed to be a novel combination.

In view of the foregoing, the application is believed to be in a condition for allowance. Should the Examiner have any suggestion for expediting allowance of the application he is invited to contact Applicants' representative at the telephone number listed below.

If any additional fee is required, please charge Deposit Account Number 19-4330.

Date: Oct 7, 2004 By: Dr. Bruce Brunda

Respectfully submitted,

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